

USEPA and USGS, Partnering to Promote Good Science and Cost-Effective Results

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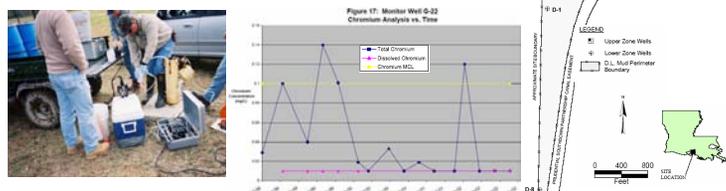
In the U.S. Environmental Protection Agency (USEPA) Superfund Program, remedial investigation and feasibility studies are typically carried out through a Response Action Contract. Contractors utilize their extensive labor pool to bring technical expertise to the USEPA on Superfund projects. In many projects, however, contractors typically subcontract specialized environmental investigative activities. These activities can include field testing, sampling, forensics, and modeling, among others.

In 1998, the Region 6 USEPA Superfund developed an inter-agency program with the U.S. Geological Survey (USGS) through an in-house liaison from the USGS to collaborate extensively on projects. Through inter-agency agreements, the Region 6 Superfund program has been able to integrate USGS scientists with USEPA Superfund issues to solve environmental problems on sites and to assist in technical oversight of fieldwork and reporting.

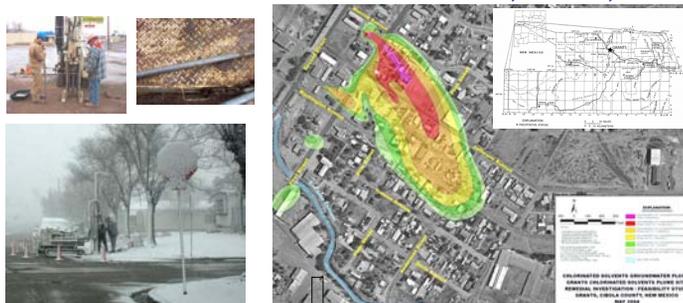
Since 1998, successful collaborations with USGS scientists have occurred on more than 30 Superfund sites in Region 6. Successes have also been realized through USGS assistance, with better understanding and application of monitored natural attenuation, bioaugmentation, soil vapor sampling and analyses, and fate and transport modeling. USGS capabilities in these and other areas of science have provided opportunities for the USEPA to obtain unbiased technical expertise from another federal agency, resulting in better science and cost efficiencies at USEPA Superfund sites.

DRILLING FLUIDS DISPOSAL, ABBEVILLE, LA

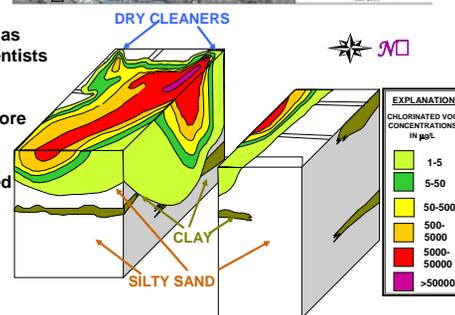
Site review and knowledge of chromium geochemistry in ground water by a USGS scientist in Dallas, TX, provided a basis to modify sampling procedures to show that chromium contamination was an artifact of sampling at the DL Mud and Gulf Coast Vacuum Systems Superfund sites in Louisiana.



CHLORINATED SOLVENTS IN GROUND WATER, GRANTS, NM

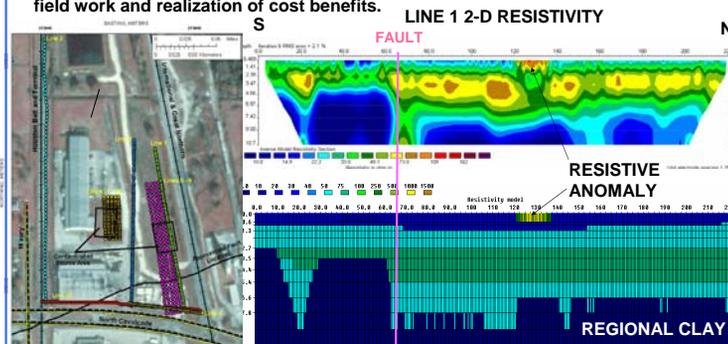


Field applications of portable gas chromatography by USGS Scientists in Texas and New Mexico have assisted investigations at four Superfund sites, resulting in more efficient field work and considerable cost benefit. Geoprobe use in Grants showed subsurface lithologies, and, when combined with the field GC, allowed better plume delineation of up to 85' deep (see block diagram).



NORTH CAVALCADE WOOD-TREATING SITE, HOUSTON, TX

Application of improved, state-of-the-art, surface geophysical equipment and methods from the USGS at five Superfund sites have provided locations of creosote liquid contamination (PAHs) and subsurface sand, silt, and clay lithologies to guide drilling activities in the field, resulting in better conduct of field work and realization of cost benefits.



PCBs IN SEDIMENTS, DEVIL'S SWAMP LAKE, LA

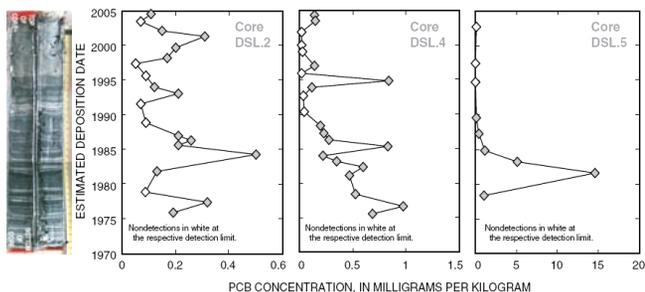


Figure 6. Trends of polychlorinated biphenyls (PCB) as determined with immunoassay kits for samples collected October 5, 2004, from Devil's Swamp Lake near Baton Rouge, Louisiana.



Chemical analyses and age-dating of sediment cores at Devils Swamp Lake in Louisiana by USGS scientists in Austin, TX, provided evidence showing dates of deposition of PCBs related to nearby contaminant releases.

REFERENCES

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